

REMARKS

Claims 4-12 and 14-24 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

1. Claims 4-7 and 14-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Saito (U.S. Pat. No. 5,890,791) in view of Futhey et al. (U.S. Pat. No. 6,612,723). This rejection is respectfully traversed.

As illustrated in Fig. 2 of applicant's specification, a light source device 21 includes a light emitting device 43 (an LED) and a lens 44a. The lens 44a receives light emitted from the light emitting device 43. A light guide 4 resides adjacent the light source 21. The light guide 4 includes a light receiving plane receiving light from the light source device. In accordance with the present invention, the lens 44a directs the light from the light emitting device 43 to the light guide 4.

Claim 4 calls for a lens provided on a light emitting portion of the light emitting device. In contrast, Saito only discloses a lens facing the light guide. Further, the prisms 18 of Futhey are provided on a waveguide 14 (See Fig. 1). This causes the light guide to be thicker since the prisms 18 are provided on the light guide side. As such, the light spreads before entering the lens. It should also be appreciated that the luminaire of Futhey is used for office space, board rooms, and customer service centers. This field of endeavor is much different than the claimed light source device for a liquid crystal device.

It should also be noted that Claim 4 calls for a lens facing a light guide so as to condense light emitted from a light emitting device on the light guide. In contrast, Saito does not employ a lens facing a light guide nor a lens condensing the light from a light emitting device (the cold cathode tube 11) on a light guide (the light guide 12). The description at col. 7 lines 1-7 is irrelevant. Here, Saito states that the difference between his invention's prism 13a (of light control sheet 13) and a prism of a conventional Fresnel lens resides in the fact that a boundary surface at only one side of a Fresnel lens prism is used while a boundary surface of more than one side of the prism 13a is used. The prism 13a is located on the light control sheet 13 and does not face the cold cathode tube (the light emitting device). The prism 13a does not condense light from the cold cathode tube 11 on the light guide 12.

Claim 5 now depends from claim 4 and should be allowable for at least the same reasons as set forth above with respect to claim 4.

Claim 6 calls for the lens first recited in claim 4 to comprise any one of a semicircular pillar shape, a prismatic shape, or a partial circular pillar shape having a Fresnel lens surface. As stated above, the Saito fails to teach or suggest the lens recited in claim 4. As such, the Saito reference also fails to teach the further defined lens of dependent claim 6. Futhey fails to cure this deficiency.

Claims 7 calls for the lens first recited in claim 4 to be provided adjacent the light receiving plane of the light guide. No such structure is provided in Saito. Even the prisms 13a are located adjacent the light emitting plane of the light guide as opposed to the light receiving plane as claimed. Notwithstanding, inasmuch as Saito fails to teach the lens of claim 4, Saito also fails to teach the further defined lens of claim 7.

Claim 14 calls for the lens first introduced in claim 5 to be any one of a semicircular pillar shape, a prismatic shape, or a partial circular pillar shape having a Fresnel lens surface. Inasmuch as Saito fails to teach the lens of claim 5, Saito also fails to teach the further defined lens of claim 14.

Claim 15 calls for the lens first introduced in claim 5 to be provided adjacent the light receiving plane of the light guide. As stated above, even the prisms 13a of Saito are not positioned in this way. Furthermore, inasmuch as Saito fails to teach the lens of claim 5, Saito also fails to teach the further defined lens of claim 15.

2. Claims 8-11 and 16-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, et al. (U.S. Patent No. 6,231,200). This rejection is respectfully traversed.

Claim 8 calls for an illumination device which supplies light to a liquid crystal panel. The illumination device comprises a light source device which emits light, and a light guide having a light receiving plane which receives light from the light source device. The light source device comprises a light emitting device and a lens which receives the light emitted from the light emitting device. The lens is provided on a light emitting portion of the light emitting device.

Shinohara only teaches a lens facing a light guide. Shinohara fails to teach a lens provided on a light emitting portion of the light emitting device as claimed. Futhey fails to cure this deficiency. That is, Futhey teaches prisms 18 which are provided on the waveguide 14. As such, the light spreads before entering the lens.

The claimed lens 44a of the light source 21 sets the directivity of the light exiting from the light source device to be high in the height direction in which the dimension of

the light receiving plane of the light guide is small, and thus, the light from the light source device can be incident on the light guide as much as possible, thereby improving the efficiency of incidence of light on the light guide. Also, the directivity of the exiting light is set to be low in the width direction in which the dimension of the light receiving plane of the light guide is large, and thus uniformity of luminous intensity can be achieved.

Claim 9 now depends from claim 8 and should be allowable for at least the same reasons as set forth above with respect to claim 8.

Claim 10 calls for the lens first introduced in claim 8 to have one of a semicircular pillar shape, a prismatic shape, or a partial circular pillar shape having a Fresnel lens surface. Inasmuch as Shinohara fails to teach the lens of claim 8, Shinohara also fails to teach the further defined lens of claim 10.

Claim 11 calls for the lens first introduced in claim 8 to be provided adjacent the light receiving plane of the light guide. Inasmuch as Shinohara fails to teach the lens of claim 8, Shinohara also fails to teach the further defined lens of claim 11.

Claim 16 calls for the lens first introduced in claim 9 to have any one of a semicircular pillar shape, a prismatic shape, or a partial circular pillar shape having a Fresnel lens surface. Inasmuch as Shinohara fails to teach the lens of claim 9, Shinohara also fails to teach the further defined lens of claim 16.

Claim 17 calls for the lens first introduced in claim 9 to be provided adjacent the light receiving plane of the light guide. Inasmuch as Shinohara fails to teach the lens of claim 9, Shinohara also fails to teach the further defined lens of claim 17.

3. Claims 12 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara in view of Futhey as applied to claims 8 and 9 above, and further in view of Kawachi, et al. (U.S. Pat. No. 6,220,741). This rejection is respectfully traversed.

Claim 12 calls for the liquid crystal device according to claim 8 to further comprise a control circuit. Inasmuch as Shinohara fails to teach the liquid crystal device of claim 8, Shinohara also fails to teach the further defined liquid crystal device of claim 12. Futhey and Kawachi fail to cure this deficiency.

Claim 18 calls for the liquid crystal device according to claim 9 to include a control circuit. Inasmuch as Shinohara fails to teach the liquid crystal device of claim 9, Shinohara also fails to teach the further defined liquid crystal device of claim 18. Futhey and Kawachi fail to cure this deficiency.

ALLOWABLE SUBJECT MATTER

Applicant acknowledges with thanks the allowance of claims 19 and 20. With respect to the statement of reasons for allowance, applicant respectfully notes that reasons for allowance are only warranted in instances in which “the record of the prosecution as a whole does not make clear [the Examiner’s] reasons for allowing a claim or claims.” 37 C.F.R. 1.104 (e). In the present case, Applicant believes the record as a whole makes clear the reasons for allowance and therefore no statement by the Examiner is necessary or warranted, especially since the statement may unfairly focus on certain reasons for allowance which are not reflected by the prosecution history. Therefore, the record should reflect that Applicant does not necessarily agree with each statement in the reasons for allowance. For example, while Applicant believes the

claims are allowable, Applicant may not unequivocally agree that patentability resides solely in the specific feature or combination of features identified, or that each feature or combination of features identified is required for patentability, or that equivalents of any of the recited features are outside the scope of the claims. Moreover, to the extent the reasons for allowance do not separately address the subject matter of all the claims, Applicant does not acquiesce to any inference that the non-addressed claims fail to present other reasons for patentability apart from the patentability of the claims which were specifically addressed by the Examiner.

NEW CLAIMS

New claims 21-24 are added. Claims 21 and 22 further define the illumination device recited in claims 4 and 8 respectively. Claims 23 and 24 independently recite alternate shapes for the lens of the light source device. Favorable consideration of these new claims is respectfully requested.

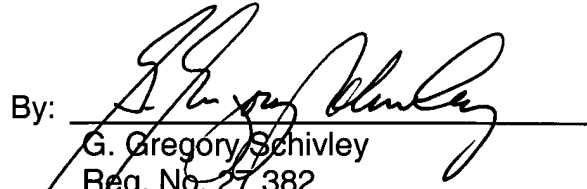
CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the

Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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